

App. No. 10/065,738  
Amendment dated March 29, 2004  
Reply to Office action of December 29, 2003

### REMARKS

#### *Summary of Amendments*

- Paragraph 0101 of the specification has been amended as kindly suggested by the Examiner in the penultimate sentence on page 8 of the present Office action.
- Independent claims 1 and 6 have been slightly revised by changing the location of the word "selectively" in each.
- Claim 16 has been revised to recite an "*amorphous* diamond-like carbon thin film." Claim 17 has in turn been amended to accord with this revision to claim 16.

#### *Objections - Specification*

The specification has been objected to for failing to provide antecedent basis for the recitation in claims 1 and 6 of a "selectively resonant structure."

The present amendment to the specification has not been made in response to this objection, but rather, in accordance with the Examiner's suggestion near the end of page 8 of the present Office action. Nevertheless, both claim 1 and claim 6 have been amended to recite that the magneto-optical section recited is "for *selectively* rotating the polarization plane of incident light of at least two wavelengths," rather than recite, as was previously the case, "dielectric multi-layer films . . . in an arrangement together with said magneto-optical section predetermined to create a selectively resonant structure."

Accordingly, it is respectfully submitted that the present revisions of claims 1 and 6 effectively render moot the objection to the specification made in the current Office action.

#### *Claim Rejections - 35 U.S.C. § 102*

##### Claims 16 and 17; Anthony et al. '731

Claims 16 and 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 5,273,731 to Anthony et al.

As noted in Applicant's reply to the previous office action in the present application, Anthony et al. is directed to—and only to—*polycrystalline diamond* films.

App. No. 10/065,738  
Amendment dated March 29, 2004  
Reply to Office action of December 29, 2003

The inventive subject matter as recited in claim 16 is directed exclusively to *amorphous* (non-crystalline) DLC thin films. Nevertheless, in the present Office action, the Examiner has pointed out that the expression "diamond-like carbon" as used in claim 16 of the present application could be construed by usage in the art as encompassing crystalline diamond forms. Moreover, at the end of page 7 and continuing to the top of page 8 of the Office action, the Examiner has written that while he concurs that Anthony et al. disclose only *polycrystalline* diamond films, "the recitation of hydrogen in [Applicant's claimed] film is clearly insufficient to distinguish over crystalline or polycrystalline films."

In response, Applicant has amended claim 16 to recite an "*amorphous* diamond-like carbon thin film." In addition, the recitation "incorporating hydrogen" has been deleted.

Accordingly, it is believed that the present revision of claim 16 is sufficient to disclaim diamond-like films such as they may be understood to be inclusive of crystalline films, and that Anthony et al. do not anticipate the diamond-like carbon thin film of the present invention as recited in claim 16.

Applicant's previous reply noted:

In the present specification, the term "amorphous" is not used, but because low-temperature CVD deposition *cannot* result in mono- or polycrystalline diamond, it is respectfully submitted that persons skilled in the art would expect the low-temperature CVD deposition[,] used in the present invention [in order] to produce the claimed DLC film[,] to be capable *only* of producing amorphous DLC.

In turn, in the present Office action the Examiner wrote:

Thus, it appears that one of ordinary skill would have recognized that the . . . method . . . disclosed in the instant specification *inherently* yields only *amorphous* diamond-like carbon films.

It is respectfully submitted that the amendment made to claim 16 is to comply with a requirement of form as set forth by the Examiner, and that the amendment finds support for the reasons the Examiner has described, and in paragraph 0101 now amended as suggested by the Examiner. Furthermore, it is respectfully that claim 16 now recites subject matter of the present invention in a manner sufficient to distinguish that subject matter over the Anthony et al. reference.

App. No. 10/065,738  
Amendment dated March 29, 2004  
Reply to Office action of December 29, 2003

Claims 1, 5, 6 and 13; Matsushita et al. (2002/0063941A1)

Claims 1, 5, 6 and 13 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. App. Pub. No. 2002/0063941 A1 to Matsushita et al.

Under this section of the Office action, the Examiner has repeated the grounds for rejection made in the previous Office action, concluding that "one of ordinary skill would regard a resonant structure that resonates at *predetermined* wavelengths as a 'selectively resonant structure.'" The previous Office communication also pointed out that the filter transmission peaks at the resonant frequencies in a Fabry-Perot filter are separated by the free spectral range (FSR).

As noted in response to the previous Office action, if the configuration of dielectric films on either side of a magneto-optical film is interpreted as being a Fabry-Perot filter, such a configuration would be understood to transmit (that is, resonate) at a number of frequencies.

In contrast, it is believed that the transmission peaks illustrated in Figs. 2-7 of the present specification are not merely a periodic response in which the peaks are separated by the FSR. Nevertheless, the specific resonant response designed into the claimed resonant structure does not produce a Faraday rotator/optical isolator having a structure that is "selectively resonant" after it is made.

The specific resonant response designed into the claimed resonant structure, *in combination with* the selective rotation by the claimed magneto-optical section of the polarization plane of incident light, produces a Faraday rotator/optical isolator, as now recited in claims 1 and 6, tuned to rotate only light of at least two select wavelengths.

At the bottom of page 9, regarding claims 1 and 6 the Examiner states, "The structure *disclosed* for selecting multiple wavelengths distinguishes over that of Matsushita et al." This statement would appear to be an indication by the Examiner that the subject matter of independent claims 1 and 6 is patentable, but not as currently recited.

Claims 1 and 6 have been revised to strike "selectively" from the phrase "dielectric multi-layer films . . . in an arrangement together with said magneto-optical section predetermined to create a selectively resonant structure." Instead each claim now recites a magneto-optical section "for *selectively* rotating the polarization plane of incident light of at least two wavelengths." Of course, this revision to claims 1 and 6 finds ample support in the description section of the present specification—and in the preamble to claim 1 itself.

For the reasons set forth above, it is believed that claims 1 and 6 in their current form distinguish over Matsushita et al.

App. No. 10/065,738  
Amendment dated March 29, 2004  
Reply to Office action of December 29, 2003

***Claim Rejections - 35 U.S.C. § 103***

Claims 4 and 10: Matsushita et al. in view of Ricoh (JP 11-030770 A)

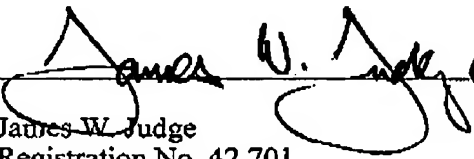
Claims 4 and 10 stand rejected under 35 U.S.C. § 103(a) over the Matsushita et al. reference in view of Japanese Pat. App. No. Pub. H11-030770 in the name of Ricoh Co., Ltd.

This rejection, as those above made under 35 U.S.C. § 102, has also been repeated in the present Office action, and likewise Applicant's previous response to address the rejection is repeated by urging that as the independent claims from which these claims depend should be held allowable for the reasons argued above, the rejections are rendered moot.

For the foregoing reasons it is believed that all the pending claims should be held allowable. Accordingly, Applicants courteously urges that this application is in condition for allowance. Reconsideration and withdrawal of the rejections is requested. Favorable action by the Examiner at an early date is solicited.

Respectfully submitted,

March 29, 2004

  
James W. Judge  
Registration No. 42,701

JUDGE PATENT FIRM  
Rivière Shukugawa 3<sup>rd</sup> Fl.  
3-1 Wakamatsu-cho  
Nishinomiya-shi, Hyogo 662-0035  
JAPAN  
Telephone: 800-784-6272  
Facsimile: 425-944-5136  
e-mail: [jj@judgepat.jp](mailto:jj@judgepat.jp)